CLAIMS:

1. A method of dental treatment, comprising:

applying a non-toxic chromophore to a portion of the oral cavity;

delivering a low dose of radiation to the chromophore during a session, the radiation having a wavelength in the absorption band of the non-toxic chromophore and the dose being lower than the power density to which the chromophore is normally responsive; and

repeating the step of applying radiation in subsequent sessions until the chromophore is activated.

2. The method of claim 1, wherein the chromophore is a tooth whitening agent.

3. The method of claim 1, wherein chromophore is an antimicrobial agent.

4. The method of claim 1, wherein the step of applying a chromophore further comprises applying a film to at least one tooth, the film serving as a carrier for the chromophore.

5. The method of claim 1, wherein the power density of radiation applied to the chromophore during a session ranges from about 1 mW to about 10 W.

6. The method of claim 1, wherein power density of radiation applied to the chromophore during a session ranges from about 10 mW to about 1 W.

7. The method of claim 1, wherein wavelength of radiation applied to the chromophore during a session ranges from about 280 nanometers to about 1400000 nanometers.

8. The method of claim 1, wherein wavelength of radiation applied to the chromophore during a session ranges from about 300 nanometers to about 1300 nanometers.

9. The method of claim 1, wherein wavelength of radiation applied to the chromophore during a session ranges from about 400 nanometers to about 900 nanometers.

10. The method of claim 1, wherein the method further comprises applying a second chromophore to a portion of the oral cavity and then delivering a second dose of optical radiation

to the second chromophore at a wavelength band corresponding to the absorption band of a second chromophore.

11. The method of claim 10, wherein said doses of radiation corresponding to said chromophores are delivered substantially simultaneously.

12. The method of claim 10, further comprising irradiating the oral cavity with radiation having wavelenth components in said absorpotion bands of the two chromophores such that each chromophore absorbs a portion of the radiation.

13. The method of claim 1, wherein the method further comprises delivering a second dose of optical radiation to a second chromophore at a wavelength band corresponding to the absorption band of a second chromophore.

14. The method of claim 13, wherein the second chromophore is an exogenous chromophore.

15. The method of claim 13, wherein the second chromophore is an endogenous chromophore.

16. The method of claim 13, wherein delivering said doses of radiation comprises irradiating the oral cavity with radiation having wavelength components in the absorption bands of said chromophores such that each chromophore absorbs a portion of the radiation.

17. The method of claim 1, wherein the method further comprises heating a target region of the oral cavity.

18. The method of claim 1, wherein a second band of optical radiation is applied to heat the target region of the oral cavity.

19. A method of whitening at least a portion of a tooth, comprising:

directly photobleaching a target region of the tooth with optical radiation having one or more wavelength components absorbable by at least one chormophore present in the tooth.

20. The method of claim 19, wherein said chromophore is in a staining residue.

21. The method of claim 20, wherein said staining residue is present on the tooth surface.

22. The method of claim 20, wherein said staining residue is present within the tooth dentine.

23. The method of claim 20, wherein the wavelength band corresponds to the spectrum of tooth staining substances selected from the group consisting of wine, coffee, tobacco smoke residue and combinations thereof.

24. The method of claim 1, wherein the method further comprises heating the target region.

25. The method of claim 24, wherein the step of heating further comprises delivering radiation to the target region to provide heating.

26. A method of whitening and brightening at least a portion of a tooth, comprising

thermobleaching a target region of the tooth with optical radiation in a spectrum absorbed by tooth stain or tooth structure.

27. A method of whitening and brightening at least a portion of a tooth, comprising

photobleaching a target region of the tooth with optical radiation in a spectrum absorbed by exogenous or endogenous photosentisizers present in said region.

28. The method of claim 27, wherein said endogenous photosenstisizer is oxygen.

29. The method of claim 28, wherein said spectrum is in a range of any of about 580±20 nm, 630±20 nm, 760±20 nm, 1060±20 nm, or 1268±20 nm.

30. The method of claim 21, wherein said chromophores are endogenous photosensitizers comprisingare organic molecules.

31. The method of claim 30, wherein and wavelengths components are in a range of about 280 -700 nm.

32. A method of whitening and brightening at least a portion of a tooth, comprising:

photoactivating an internal structure of the tooth to cause rejuvenation of said structure.

33. The method of claim 32, wherein said photoactivating step causes growth of new dentine in said tooth.

34. The method of claim 32, wherein said photoactivating step causes improvement in the enamel/dentine junction of said tooth.

35. A tooth-whitening strip, comprising

a flexible thin film adapted for application to a subject's teeth, said flexible film comprising

a polymeric matrix, and

at least one chromophore disposed in said matrix, said chromophore being activated in response to radiation in a selected bandwidth to cause whitening of the teeth.

36. The tooth-whitening strip of claim 35, wherein said chromophore comprises a non-peroxide whitening agent.

37. The tooth-whitening strip of claim 35, wherein said film is capable of adhering to the subject's teeth.

38. The tooth-whitening strip of claim 35, wherein said matrix is formed of ethylene oxide.

39. The tooth-whitening strip of claim 35, wherein said strip has a thickness in a range of about 20 micron to about 1500 microns.

40. The tooth-whitening strip of claim 35, further comprising a plasticizer.

41. A tooth-whitening film, comprising

a flexible substrate adapted for application to a subject's teeth, and

a chromophore disposed on at least a surface of said substrate, said chromophore being capable of activation in response to radiation having selected wavelength components to cause whitening of the subject's teeth in contact with said substrate's surface.

42. A method of whitening and brightening at least a portion of a tooth, comprising

irradiating a target region of the tooth with optical radiation having a spectrum absorbable by any of tooth stain, tooth structure or an exogenous chromophore applied to the target region, and

diagnosing tooth color and reflectance by utilizing radiation reflected from the tooth in said spectrum or in a different spectrum.